CLAIMS

What is claimed is:

5   1. A method for authentication in a computer system, the method comprising the steps of:
     bringing the computer system out of reset; checking if a memory section is written and if
     so, allocating the memory section to memory function; verifying device identification if
     the memory section is not written, and if no match is found, halt the system; repeat read
     to set an incremental input key, and if the key cannot be altered, halt the system; verify
10   authentication return keys, and if the verify fails, halt the system; and continue to bring
     the computer system out of reset.

     2. The method of claim 1 further comprising the step of reading of incremental
     authentication input keys and authentication return keys.

     3. The method of claim 1 further comprising the step of using the first eight bytes of each
15   memory section to provide device identification.

     4. The method of claim 3 further comprising the step of using part of the identification as a
     fixed value as long as a section is serving the authentication function.

     5. The method of claim 1 further comprising the step of reading a first field of each section
     to ensure that the section is serving the authentication function.

20   6. The method of claim 1 further comprising the step of reading a second field as an
     incremental authentication input key.

     7. The method of claim 6 further comprising the step of incrementing the contents of the
     second field every time it is read.

     8. The method of claim 7 further comprising the step enabling the CPU to set the value of
25   the second field by reading it a specified number of times.

     9. The method of claim 8 further comprising the step using the value of the second field to
     calculate values of the authentication keys.

10. The method of claim 1 further comprising the step of obsolescing the authentication keys when an attempt to defeat the system is made by placing a copy of known authentication keys in memory.

11. In a computer system, a random access memory device comprising: a plurality of memory cells arranged in sections, including a first section containing a manufacturer identification fixed when the computer system is in an authentication mode; a second read incremental section incrementing at each read of a central processor unit of the computer system; and an authentication return keys third section including a secret authentication key.